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The initial effort on this project has been concentrated on the assembly of a breadboard layout of the system shown in the proposal. Audio band-limiting filters and wide-band, phase-shift networks have been purchased, as have analog operational amplifiers for use as integrators.

Analog multipliers of the diode ring type¹ have been constructed from selected diodes, and input transformers have been designed and constructed for this application. The operation of these circuits appears satisfactory. Impedance-matching amplifiers for use in conjunction with the phase-shift networks are also being constructed.

An acoustic delay line is being fabricated from metal tubing. This will be used to study the effect of fixed, reflection-free delays in one channel of the correlator and to prepare two-channel tape recordings for use as repeatable source material.

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¹ R. H. Wilcox: Use of a Diode Ring as a Four-Quadrant Multiplier; Review of Scientific Instruments, November 1959, pp. 1009-1011.

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